

Title (en)
CLOSED WING VTOL AIRCRAFT

Title (de)
BOXWING-VTOL-FLUGZEUGE

Title (fr)
VTOL AVEC AILES EN ANNEAU

Publication
EP 3999416 B1 20240228 (EN)

Application
EP 20751195 A 20200717

Priority
• GB 201910278 A 20190718
• GB 2020051716 W 20200717

Abstract (en)
[origin: GB2585864A] An aircraft 1 comprising a main body 10 located between a pair of wing sections 12, each wing section comprising a front wing 14 and a rear wing 16. The fore and aft wings each comprise a first end 17, 20 connected to the main body. A second end 18 of the front wing is connected to a second end 22 of the rear wing. Each wing section comprises a propulsion unit located between the front and rear wings. Each propulsion unit may comprise pivotable first 32 and second rotors 34. The aircraft may be an unmanned aerial vehicle or single-seat aircraft suited for vertical take-off and landing, VTOL aircraft. Each wing section may form a loop connected to the main body in at least two locations, having good mechanical strength and reduced induced drag properties. The rear wing may be above the front wing in a height direction H.

IPC 8 full level
B64C 3/10 (2006.01); **B64C 27/08** (2023.01); **B64C 27/26** (2006.01); **B64C 29/00** (2006.01); **B64C 39/02** (2023.01); **B64C 39/06** (2006.01); **B64C 39/08** (2006.01); **B64U 10/13** (2023.01); **B64U 30/10** (2023.01); **B64U 30/20** (2023.01)

CPC (source: CN EP GB US)
B64C 3/10 (2013.01 - CN EP GB US); **B64C 27/08** (2013.01 - CN EP GB US); **B64C 27/26** (2013.01 - CN EP US); **B64C 29/0016** (2013.01 - CN GB US); **B64C 29/0025** (2013.01 - CN); **B64C 29/0033** (2013.01 - CN EP); **B64C 39/062** (2013.01 - US); **B64C 39/068** (2013.01 - CN EP GB US); **B64C 39/08** (2013.01 - CN EP GB); **B64D 27/02** (2013.01 - GB); **B64U 10/25** (2023.01 - CN EP GB US); **B64U 30/10** (2023.01 - CN EP GB US); **B64U 30/26** (2023.01 - CN EP GB US); **B64U 30/295** (2023.01 - CN EP GB US); **B64U 30/297** (2023.01 - CN EP GB US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
GB 201910278 D0 20190904; **GB 2585864 A 20210127**; **GB 2585864 B 20220427**; CN 114174170 A 20220311; EP 3999416 A1 20220525; EP 3999416 B1 20240228; US 11975836 B2 20240507; US 2022266995 A1 20220825; WO 2021009516 A1 20210121

DOCDB simple family (application)
GB 201910278 A 20190718; CN 202080050474 A 20200717; EP 20751195 A 20200717; GB 2020051716 W 20200717; US 202017626513 A 20200717